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# STRATEGIC STUDIES PROJECT



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Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE <b>MAR 1985</b>		2. REPORT TYPE		3. DATES COVERED -	
4. TITLE AND SUBTITLE <b>The Bundesmarine: Operational Capabilities and Contributions to the Alliance</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>National War College, 300 5th Avenue, Fort Lesley J. McNair, Washington, DC, 20319-6000</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <b>see report</b>					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES <b>46</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

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THE NATIONAL WAR COLLEGE  
STRATEGIC STUDIES REPORT ABSTRACT

TITLE: The Bundesmarine: Operational Capabilities and Contributions  
to the Alliance

AUTHORS: James W. Pate, Captain, USNR  
Timothy S. Brady, Captain, USN  
Robert V. Foley, Commander, USN  
Bayard W. Russell, Commander, USN

DATE: MARCH 1985

This is a study of the Federal German Navy, its organization, hardware, command structure and mission within the NATO Alliance. It assesses that Navy's ability to fulfill its mission in the context of the Soviet threat and Atlantic Alliance requirements.

## BIOGRAPHICAL SKETCHES

Captain James W. Pate, USNR, is a Naval Aviator with an operational background in attack aviation and carrier air wing tactical doctrine. Having served on several aircraft carriers, Captain Pate has made numerous cruises to the Western Pacific. He has participated in several NATO War-at-Sea exercises, both in the Pacific and Indian Oceans. Most recently his experience has been within units of the Naval Air Reserve where he has served both as a drilling reservist and in active duty assignments. He commanded Tactical Electronic Warfare Squadron Three Zero Nine. Captain Pate holds a B.S. degree from Millsaps College and is a graduate of The National War College Class of 1985.

Captain Timothy S. Brady, USN (B.Ch.E, University of Minnesota; M.A., Naval Postgraduate School) developed an interest in the NATO navies during his early years as a submarine officer when he participated in NATO exercises in the North Atlantic. Captain Brady has served in five submarines and one surface ship, which he commanded. In addition he has served on the staffs of Commander, Submarine Group Five, Commander Submarine Force, U.S. Pacific Fleet, and the Chief of Naval Operations. Captain Brady is a graduate of The National War College, Class of 1985.

Commander Robert V. Foley, USN (B.A., University of Massachusetts; MPA, Golden Gate University), a Surface Warfare Officer, has served aboard five ships in the U.S. Atlantic Fleet and has had extensive experience operating in the NATO Northern Flank Conducting carrier battle group and amphibious operations. His most recent operational experience has been as executive officer of the guided missile destroyer USS COONTZ (DDG 40), where he conducted carrier battle group operations with both US and Allied Forces. Commander Foley is a 1985 graduate of The National War College.

Commander Bayard W. Russell, USN (B.A., University of North Carolina) a surface warfare officer, developed an interest in NATO Navies when assigned to the staff Standing Naval Force Atlantic as the Force Weapons Officer in 1976. He has served in three destroyers in the Atlantic and one in the Pacific. His most recent operational experience was as executive officer of the USS MOOSBROGGER (DD980). Commander Russell is a graduate of The National War College Class of 1985.

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## CHAPTER I

### INTRODUCTION

West Germany's geographic position straddling the Danish peninsula gives it interior lines of communication to both the Baltic and the North Seas (see Appendix A and B). With Denmark, West Germany occupies a strategic position on the choke points through which all shipping entering and leaving the Baltic must pass. Furthermore, the West German and Danish Navies are the only allied navies regularly operating in the Baltic and therefore, the only ones capable of opposing Soviet and Warsaw Pact use of the Baltic and its approaches. It is for these reasons that West Germany's Navy is of vital importance to the NATO Alliance.

The purpose of this paper is to examine the Federal German Navy (FGN), to assess its operational capabilities, and its ability to perform the missions assigned it, to examine its contribution to the NATO Alliance and to determine the FGN's ability to perform other missions within the Alliance. Appendix C provides details concerning the FGN, its forces and organization.

## CHAPTER II

### SCENARIO

#### Soviet Threat

Without any question, the dramatic growth of the Soviet Navy during the last two decades, ranks as one of the most significant developments, militarily, in the post war era. Under the leadership of Admiral of the Fleet Gorshkov, the Soviet Navy has been totally transformed from what had been largely a coastal defense force, to the ocean going fleet of today, capable of carrying the Russian offensive on the high seas in waters far distant from the Soviet Union. While a detailed study of the present day U.S.S.R. naval order of battle is well beyond the scope of this paper, a general assessment of Soviet perceptions and intentions is appropriate. Why have the Soviets built such a large Navy?

Geographical limitations and lack of central position deprives Soviet Sea Power of what Mahan called "inner lines of communication."

Moreover, the U.S.S.R. continues to be a relatively resource-rich State with little need for defending Soviet sea lines of communication.

Certainly, at least one primary mission, if not the overriding long range goal, would be that of providing naval support for any Soviet land battle against NATO forces in Northern Europe. Admiral Gorshkov defines the U.S.S.R. Navy as:

"... the branch of the armed forces intended to carry out strategic and operational missions in the sea and ocean theaters of combat operations. With respect to its combat capabilities, today's Navy is capable of delivering strikes by its strategic nuclear forces against important enemy ground targets, of



destroying enemy ocean and sea communications, and to evacuate our own sick and wounded. The Navy can conduct a naval operation both independently and jointly with other branches of the armed forces."1

Probably the most important of the above missions from a NATO perspective, in general, and a Federal Republic of Germany perspective, in particular, is that of disrupting NATO sea lines of communication. Without a NATO capability for rapid reinforcement and resupply, the defense of Central Europe by conventional means may not be possible.

In further defining the Soviet Navy's mission in support of the land battle, Admiral Gorshkov writes:

"In our day, a Navy operating against the shore possessed the capability . . . of directly affecting the course and even the outcome of the war. In this connection, Naval operations against the shore have assumed dominant importance in Naval warfare, and both the technical policy of building a Navy, and the development of the art of Naval Warfare have been subordinated to them."2

Should a major war erupt between the NATO nations and the Warsaw Pact, it would likely come about as a result of Western resistance to Soviet aggression. The combat action could start in the central region of Western Europe, or on either or both flanks, but it would primarily be a struggle for control of the large Western European landmass and its industrial capacity. Naturally such a conflict would be primarily a battle between ground forces, with the Navy playing a secondary role supporting ground elements. The Soviets would be seeking to shorten the war as much as possible in an attempt to nullify the possibility of escalation to nuclear conflict and in this scenario the Navy would have a vital and essential role to play. The Soviet Navy would have the

primary mission of preventing the United States from either providing reinforcements to the Western Allies or diverting Pact forces into defensive roles. This U.S. support and aid would prolong the war and possibly enable the advantage to be wrested from Soviet hands. To prevent this occurrence, the Soviet Navy would move with all haste to seal and secure European ports against any reinforcement, and to gain full control of the Norwegian Sea. This action could blunt or even destroy the offensive capabilities of the NATO Naval forces.<sup>3</sup>

To meet these maritime missions the Soviet Navy has grown to a force which significantly outnumbers NATO naval combatants. "In gross terms, Jane's Fighting Ships shows that NATO, excluding France and Spain, has about 680 active and reserve naval surface combatants and submarines while the Warsaw Pact has a total of about 760."<sup>4</sup> This Soviet Naval force is divided into four major fleets: Northern, Baltic, Black Sea/Caspian and Pacific, with each fleet having a distinctive force mixture and capability.

The largest is the Red Banner Northern Fleet.

. . . a modern active force of exceptional power in numbers and modern hulls and advanced weapons systems. Its major base at Murmansk has been modernized and enlarged appropriately. The whole force, one hundred fifty surface combatants and two hundred submarines, organic air squadrons, an amphibious warfare group including specialized landing troops, support vessels and bases is in structure and size, offensive in character."<sup>5</sup>

In the Arctic wasteland between Norway and the Soviet port of Murmansk, the Soviets have amassed what has been described as the greatest concentration of naval, ground and air forces to be found anywhere in the world."<sup>6</sup>

This buildup of Soviet forces on the Kola Peninsula is not without purpose. Clearly, the Soviets appreciate perhaps more than anyone, the strategic importance of the air bases in Norway and Iceland as well as the vital importance of controlling the Norwegian Sea, through which the large Soviet submarine force must pass in order to interdict the NATO sea lines. In the event of Soviet aggression, NATO must expect almost simultaneous attacks on the Northern, Central and Southern fronts. It is possible that, as in World War II, a general assault westward might be preceded by an attack on Norway. The seizure of Northern Norway would give the Soviets elbow room, would allow Soviet ships and aircraft to sail undetected from Kola, and would give the U.S.S.R. command of the Norwegian Sea.

The disparity of forces is such that the prospects for the success of such an operation seem relatively high. The Leningrad Military District stretches from Navoya Zemlya to the Baltic, and comprises two mechanized infantry divisions (14,000 men and 200 plus tanks). One of the divisions is in immediate readiness. There are six other divisions at lower degrees of readiness. Also in the area is an airborne division, an artillery brigade, an army rocket brigade, and an air defense brigade, together with the 13th Tactical Air Army of 300 plus aircraft (including 120 fighter bombers) and a helicopter regiment. Against this the Norwegians have one battalion group and a brigade group at Bardfoss.

While the Northern Fleet presents the greatest concentrated Naval threat to NATO, for Germany the most immediate concern must be control

of the Baltic Sea. In the Baltic fleet the Soviet Naval force mix approximates the requirement for that which Admiral Gorshkov calls the "dominant importance of Naval Operations against the shore."

"In the Baltic Sea, the fleet, land and air forces are a conglomerate of Russian, Polish and East German elements; not necessarily the stronger on that account. The army and naval air forces pose the greatest threat along the Baltic shores to the Baltic Approaches. There is immediate land access to Schleswig-Holstein for six standing divisions of the Warsaw Pact. On the sea flank, the Baltic Fleet has developed the appearance -- and certainly the capability -- of being an amphibious warfare force: 6 cruisers, 10 destroyers, 30 frigates, 80 LSTs, LSA, ICTs and LCVs, 17 hovercraft, 200 fast patrol craft, 250 ocean, coastal and onshore minesweepers, and a range of support vessels. There are about 60 submarines in the fleet. In the air the Baltic Naval Aviation includes 140 strike aircraft together with reconnaissance, electronic warfare, and tanker squadrons.<sup>7</sup>

Access to the Baltic Sea is possible only through the Western Narrows, between Denmark and Norway and Sweden a choke point of strategic advantage to the NATO Alliance. Inside the Baltic however, the Warsaw Pact Naval forces enjoy a three to one advantage in numerical terms. The major part of the Baltic Coasts are in the hands of littoral states of the Warsaw Pact and of neutral Sweden: this fact considerably impedes the operations of NATO forces in this region while it benefits the Warsaw Pact in many respects.

In light of these factors the Warsaw Pact enjoys ideal conditions in the Baltic which will place it in a highly favorable position in the event of a "battle in front of its own doorstep." "These conditions will enable well rested combat effective and fully supplied naval units

### CHAPTER III

#### ALLIANCE REQUIREMENTS

In the face of this formidable threat, the NATO nations are compelled to prepare to contain both the Soviet Northern Fleet by retaining control of the Norwegian Sea and simultaneously the large Baltic Fleet by controlling the Straits. Should control of either the Baltic Straits or the Norwegian Sea fall to the Warsaw Pact then the already difficult task of seaborne reinforcement and resupply to NATO ground forces would likely fall far short of requirements.

The importance of a North American reinforcement and supply to NATO Europe in time of war is well known, yet the magnitude of the effort cannot be overemphasized.

"Reinforcement means delivering to Europe some one and one-half million men -- most by air -- and 12 million tons of their equipment and supplies -- mostly by sea. Resupply is by far the bigger job. It includes the fuel, ammunition, food, spares, replacement equipment, and supplies for both the troops in place at the outset and those moved in as reinforcements. Moreover, resupply must include the minimum essential economic requirements of the NATO nations for food, fuel, raw materials, and manufactured goods to sustain the civilian population of some 300 million, the economics and hence the war effort.

It will require between 3,000 and 6,000 merchant ships each averaging one round trip per month, to move all the necessary goods and materials."<sup>1</sup>

In the event that the Soviet Baltic Fleet alone were free to operate in the North Sea, the disastrous effect of anti-shipping operations on the NATO sealift could become decisive. While the defense

of NATO's sea areas is clearly vital to the overall war effort, no nation within the alliance is more dependent upon its success than is the Federal Republic of Germany.

"An important principal, and above all a principal in consonance with German Interests governing NATO defense planning is that of Forward Defense. Forward Defense means cohesive defense near the border with the objective of preventing any loss of ground, and limited damage. Thirty percent of the population of the Federal Republic of Germany live in a strip along the intra-German border 100Km in depth. The same strip contains 25 percent of the country's industrial capacity. This fact denies the Federal Republic of Germany any alternative to Forward Defense."<sup>2</sup>

In protecting the vital Atlantic sea lines, the NATO navies must attempt to affect a massive blockade of the key straits and gaps.

"NATO's ASW defense will be based along the Greenland-Iceland-U.K. (GIUK) Gap, where surface vessels, maritime patrol aircraft (MPA) and SSNs will attempt to prevent Kola submarines from breaking out into the deeper water of the Atlantic, where they would be much more difficult to detect. The NATO Strike Fleet, based on some three U.S. Navy carrier task groups, will operate in support, probably North of the gap."<sup>3</sup>

Control of Soviet Naval movements to and from the Baltic, as well as defense against Soviet amphibious landings in the Western approaches to the Baltic will be the responsibility of Danish and German units alone. Considering the strength of the Warsaw Pact Naval Forces and Naval Air Forces as described earlier, NATO strategy must be to contain the Soviets within the Baltic.

"Allied maritime sorties -- sea and air -- against Warsaw Pact amphibious forces at sea offer an effective way to snatch the initiative from the offense, but the area for engagement is likely to be

limited chiefly to the Western end of the Baltic. If the defenders thrust in a counterattack eastward and southeastward, they would move into the area of greatest Warsaw Pact air strength."<sup>4</sup>

"The West German naval air capability is an effective weapon against ships in open water or in harbor, the more valuable as submarine operations in the shallows of the Western Baltic are difficult, in some areas altogether impracticable. German and Danish submarines will thus conduct operations in the Central Baltic."<sup>5</sup>

In addition to Naval Air the fast patrol boats of the German and Danish Navies will likely prove to be particularly effective in the narrow approaches to the Baltic. Also, once war begins, to bar the Baltic entrances to international waterways -- the Great Belt -- the Little Belt and the Sound -- the mine remains a cost effective weapon. No doubt they can be lifted or exploded, but only by a long, deliberate operation.<sup>6</sup>

## CHAPTER IV

### BUNDESMARINE EMPLOYMENT

To the Bundesmarine (FGN) falls the responsibility for naval action in the Northern front. FGN units are assigned missions in the Baltic, Baltic Approaches, North Sea, and Norwegian Sea in coordination with other allied forces.

In the Baltic, FGN units are under the control of Commander-in-Chief, German Naval Forces Headquarters at Gluecksburg-Meierwik. At Gluecksburg, the FGN maintains a state of the art computerized shorebased command and control facility providing real time information to both command and operating forces. The primary mission assigned to FGN forces is the prevention of Warsaw Pact forces from achieving amphibious assaults in coastal and island areas. These assaults would serve as flanking movements for central front attacks and support the establishment of sea lines of communication (SLOCS) and supply areas in the western Baltic. The second mission is the bottling up of Pact forces within the Baltic and thus the denial of reinforcements transiting into the North Sea for duty with the Soviet North Fleet. The Third Mission is to ensure freedom of navigation to allied surface and air units within the western Baltic and its approaches. A fourth mission is the denial of Baltic access to Pact units returning from sea and seeking the safety and facilities of Baltic ports. In performing these missions the Germans are painfully aware that they comprise three fourths of a naval force which is outnumbered three to one by Pact units and that the Baltic is their essential fight.<sup>1</sup> Therefore, the



first task of these units now and in the future must be directed toward limiting the affect of this numerical superiority. In the absence of any large building program or influx of allied forces into the Baltic the enemy must either be neutralized or destroyed before his numerical superiority can be brought to bear upon Allied naval objectives within the Baltic and its approaches. The Pact must be quickly denied the opportunity to consolidate its force and confront the allied units. An obvious and somewhat traditional choice of tactic toward this end would be an early air strike upon Pact naval units in their home waters. The strength of Pact air defense and the constricted geography of the area however, argue against the reasonableness of this approach. A more realistic approach with a greater chance of success would be the tactic of establishing an extensive defensive barrier throughout the eastern, central and western Baltic utilizing hit and run and defense-in-depth tactics. Submarine operations, to include offensive mining in the eastern Baltic should be the first echelon in this barrier of attrition. The small nonmagnetic Type 206 diesel submarine which the Germans built specifically for Baltic operations is ideally suited to this role. With its excellent minelaying and torpedo capability coupled with its silent operating capability on station, these units would exact a precious toll in pact shipping. Current German plans are to have these units remain in service through the end of the century, with twelve of the eighteen units undergoing retrofit to be delivered during 1988-91 to fill the capability gap created by the postponement of the Type 208 submarine program until after the year 2000.<sup>2</sup> Employment of

these units in a barrier/patrol scenario should begin and be most structured and intensive east of Bornholm Island in the area of Pact bases and amphibious staging areas. Here the Baltic geography and water conditions are most suited to submarine warfare. Other Allied Forces would be unable to operate as freely in this area and sustain the heavy losses projected from the preponderance of Pact air and surface superiority. The FGN operates a wing of 48 extremely capable MRCA Tornado fighter bombers at Schleswig for reconnaissance and strike in the Baltic approaches. Although long range strike by Tornados is possible into the area east of Bornholm, the high risk of mission success and aircraft loss should weigh heavy upon any decision for their routine use in this area. The Tornado could be much more effectively utilized if Pact units were to continue transiting west where shallow water makes submarine operations more difficult. Here Allied air defense and air superiority would be possible from the Second Allied Tactical Air Force in the central theater and the South Norway Tactical Air Force in the north. These forces comprised of allied fighters and Airborne Warning and Control System (AWACS) would allow the Tornado much more freedom and survivability in the interdiction of enemy shipping. Continued westward movement of Pact forces would enlarge the engagement by bringing them in contact with FGN surface units and the other FGN air wings operating in the Baltic.<sup>3</sup> The surface units operating in this area would be fast attack craft (FAC), their support units, and mine warfare units. The mine warfare units are capable of minelaying,

minehunting, and minesweeping. Initial employment of the thirty-odd units in this mine force would be their rapid deployment of mines into the Pact transit routes and expected amphibious objective areas and then a hasty return to allied SLOCs for mine clearing operations. The intent of this mining effort would be to funnel Pact shipping into more restricted areas and therefore into more advantageous positions for allied targeting. Additional FGN surface, air, and subsurface units would act to frustrate the Pact minesweeping effort. Current German plans are for the introduction of the new Type 343 minelayer into the Baltic in 1988, the 10 ships of this class will replace the aging SCHUTZ 340 class. The remaining FGN Baltic forces are the 40 FACs and their support units. These units are the most capable and modern of the FGN surface and subsurface forces in the Baltic and are capable of inflicting heavy losses upon Pact forces throughout the western Baltic. The Gepard class Type 143A FAC represents the most advanced and capable unit of its type. This link-capable platform is outfitted with the prototype rolling airframe missile (RAM) air defense system and Exocet surface to surface missile system. This unit was specifically developed for the western Baltic and has worked well with all FGN air assets as well as NATO AWACS in the anti-shipping role.<sup>4</sup> Operations most suited to these vessels and their support units would be conducted in the westernmost Baltic in amphibious operations areas and within the western narrows. Suited to hit and run tactics, these units have worked extremely well with FGN aircraft in coordinated attacks on surface ships. This unique combination of surface and air power into an

integrated anti-shipping attack tactic is made possible by the sophisticated command, control and communication (C<sup>3</sup>) system of each platform. These systems are ideally suited to the local geography, where short distances require rapid communication and allow for immediate reinforcement. Another aspect of this C<sup>3</sup> advance with less encouraging results, however, has been the coordination difficulties experienced while attempting similar operations with Danish units who don't have the real-time link capability of the Germans, yet comprise one fourth of the allied Baltic assets. An additional feature of these units is that the FGN FACS are able to perform all maintenance and rearming functions while at sea tended by their support units. These support units could remain concealed in Danish island and coastal areas. The absence of larger FGN surface units in the Baltic is based upon the belief that without adequate air cover, these units would be restricted to the westernmost areas and the approaches. These areas are considered too restrictive for large ship operations and are also more easily and economically defended by the FAC's.

Although some German shipbuilding and procurement plans for larger ships and submarines causes concern within the alliance that the Germans are pursuing a strategy which could concede the Baltic, this is not true. German control of the western Baltic and its approaches is critical to the success of naval operations in the North Atlantic and the land battle in central Europe.<sup>5</sup> If Pact forces were allowed to outflank allied land forces by amphibious assault in Germany, deny to

NATO Danish and German air bases, and exit the Baltic to reinforce the Soviet North Fleet, Germany would be isolated and completely vulnerable. The Germans are only too aware of the consequences of an inability to control the Baltic. Toward this end they have developed a unique force which they claim is capable of performing the missions assigned while remaining within the national fiscal constraints.

In the North Sea and Norwegian Sea the German mission is considerably less structured and more integrated with Allied blue water navies. The Allied mission here is to assert naval superiority and protect reinforcement and supply movements from air, surface, and submarine attack and to avert enemy mines. For this mission, which is quite different from that in the Baltic, the FGN has developed and maintains a markedly different force mix of destroyers and frigates, submarines, long range maritime patrol aircraft, mine warfare units, and supply ships. The specific mission of these forces is to ensure that the German North Sea SLOC terminals remain open for resupply. By the nature of the geography and the mission, FGN strategy in this area is much more dependent upon the effectiveness of other European navies in performance of similar tasks. This strategy is even more heavily dependent, however, upon USN carrier battle group (CVBG) operations in the Norwegian Sea. Without control of the Norwegian Sea and the engagement of the Soviet North Fleet, the battle for German resupply terminals to the south would be lost.

Of the FGN units in the area, the minewarfare forces have the most specific and independent duty. These thirty-odd units are charged with

keeping the German sea lanes, harbors, and estuaries clear for allied shipping and making them hazardous to raiding Pact units. Although having a less structured employment, the 16 destroyers and frigates of this force are slated for antisubmarine warfare (ASW) and antiship warfare (ASUW). The six diesel submarines will be used primarily for ASUW. The FGN also operates 19 Breuget Atlantique maritime patrol aircraft. Fourteen of these aircraft are configured for ASW and the others for signal intelligence (SIGINT). All of these FGN units are compatible with other allied navies. It is with the existence and employment of these North Sea forces that there is much discussion within NATO regarding FGN roles and plans.

With the continued out of area employment of USN CVBG's since the Soviet invasion of Afghanistan, the FGN has sought and accepted an expanded role in the Norwegian Sea. It is obvious that the Germans believe that the commitment to the northern flank of three U.S. CVBG's is critical to the defense of the Atlantic SLOC's. With the continued out of area deployments by the USN, there is a critical delaying role to be played by those European navies which remain essentially on station awaiting the arrival of the U.S. Carriers. The FGN defends the charge they are pursuing an expansionist naval policy to the detriment of their Baltic commitment upon these grounds.

Since the 1980 decision to permit FGN units to operate north of 61 degrees, FGN units have routinely operated in the Norwegian Sea. The six ships of the new Bremen Class Type 122 frigate class are well suited to the arduous environmental conditions of this region and have proven

to be superb ASW platforms with substantial offensive firepower and anti-air defense capability. The three LUTJENS Type 103A guided missile destroyers and the four Hamburg Class Type 101A destroyers are equally suited to the demands of operating within the area. The latter, however, being somewhat deficient in its anti-air defense capability and its command, control and communication (C<sup>3</sup>) suite. The four older Koln Class type 120 frigates, although obsolete, will be kept in service in this area. These surface units represent a credible force and are quite capable of allied mission performance in the area. These units could also be effectively employed for ASW in the Skagerrak or Kattegat should a Baltic breakout occur or Pact units were found attempting to return to Baltic ports. The six Type 205 diesel submarines in the inventory are scheduled for replacement by the Type 211 submarine in the future. The Type 211 units are designed with a special shallow water capability suitable for the northern North Sea and will be built specifically to operate outside the Baltic against surface ships and other submarines. In the meantime the FGN will continue to anticipate the Type 205 being utilized in barrier employment in the area of 55 to 60 degrees, with secondary mining missions. The FGN maritime patrol force remains as capable as other non-U.S. allied forces and can be integrated into coordinated patrol plans and operated from NATO bases. The FGN has displayed a willingness to employ these aircraft as far north as NATO planners require in order to engage Soviet submarines in transit before they reach their operational areas. This is a useful tactic as long as the base support facilities are available in Norway.

These aircraft are old and although currently being updated, will require replacement before the end of the century. The 20 Sea King helicopters in the inventory, configured for search and rescue (SAR) in the North Sea, are currently being retrofitted and will emerge with a new anti-ship role. This new capability will suit these units for operations within the Baltic and its approaches in conjunction with the FAC's, and it is anticipated that the majority of these units would be reassigned there. Other of these units could be fitted with airborne warning and surveillance systems and provide a much needed asset in the North Sea area.

As mentioned, it is the employment of these forces and plans for their replacements which give cause to question the role that the FGN sees for itself and other NATO naval forces. One argument is that the only proper role for the Germans and their small Navy is to return to the Baltic and its approaches and only conduct defense of their North Sea ports and devote their entire naval effort toward building a force with a capability specifically for these waters. The other side of this argument is that such a limited role would overlook the requirement of the FGN to make a necessary and major contribution to the alliance in an area of vital importance to them. It seems that there must be some concern amongst the Germans as to the immediate availability of the promised USN CVBG's to the Norwegian Sea. Based upon this suspicion and their ability to provide an alternative, the FGN has opted for an expanded role outside the Baltic and into the North and Norwegian Seas. This role foresees the necessity of European forces being in the area



and filling in while awaiting the arrival of more U.S. forces. This strategy points out an awareness on the part of the Germans to the realities of the world situation. The Germans have never indicated any abandoning of their commitment in the Baltic. The current strategy is seen by them as merely shifting forces to make them available to the alliance in an area where they perceive a need.

## CHAPTER V

### CONCLUSIONS

The Federal German Republic has developed a Naval Plan and a force mix which reflects a serious attempt to balance a challenging wartime mission with the limited resources available. The principal role of the NATO navies in time of war will be to ensure safe passage for a massive sealift in support of the battle in Europe. For the German Navy, in particular, this will require maintaining control of the western Baltic and its approaches, preventing a westward movement of the Warsaw Pact Baltic Fleet into the North Sea and protection of the western approaches to the Baltic. For Germany, there is no alternative to a strategy of forward defense, and this requires that the German Navy keep the Western Baltic and its approaches under allied control. Success here, provided other NATO navies are able to control the Soviet North Fleet, will permit the maritime resupply of allied ground forces.

In planning for its primary role in the Baltic, the FGN faces a number of serious obstacles:

- In numbers of hulls, the FGN is outnumbered in the Baltic by a factor of three to one.
- The major part of the Baltic coastline is in the hands of Warsaw Pact nations. More importantly, owing to the relatively close proximity of air fields and superior air assets, the Soviets will enjoy air superiority over the Baltic from the outset.
- Although some operational warning time for the allies may be anticipated, the actual outbreak of hostilities will almost surely begin

with the Soviets possessing the initiative and early momentum. There will likely be a coordinated strike by all Warsaw Pact forces. Under such circumstances, an early and massive amphibious assault in the Western Baltic will afford little reaction time to the FGN.

In the face of this threat some conclusions can be drawn regarding the credibility of the German Navy to accomplish its primary role in the Alliance:

1. Considering the odds which favor the Warsaw Pact both in numbers of hulls and air superiority east of Bornholm Island, we see no role in the Baltic for the FGN destroyer and frigate forces.

2. Offensive operations for the FGN in the eastern Baltic will be limited to submarine minelaying operations and torpedo attacks.

3. The FGN has neither the capability to challenge the Soviet Fleet in the Baltic nor the reserve strength to prevail in protracted operations in the western narrows.

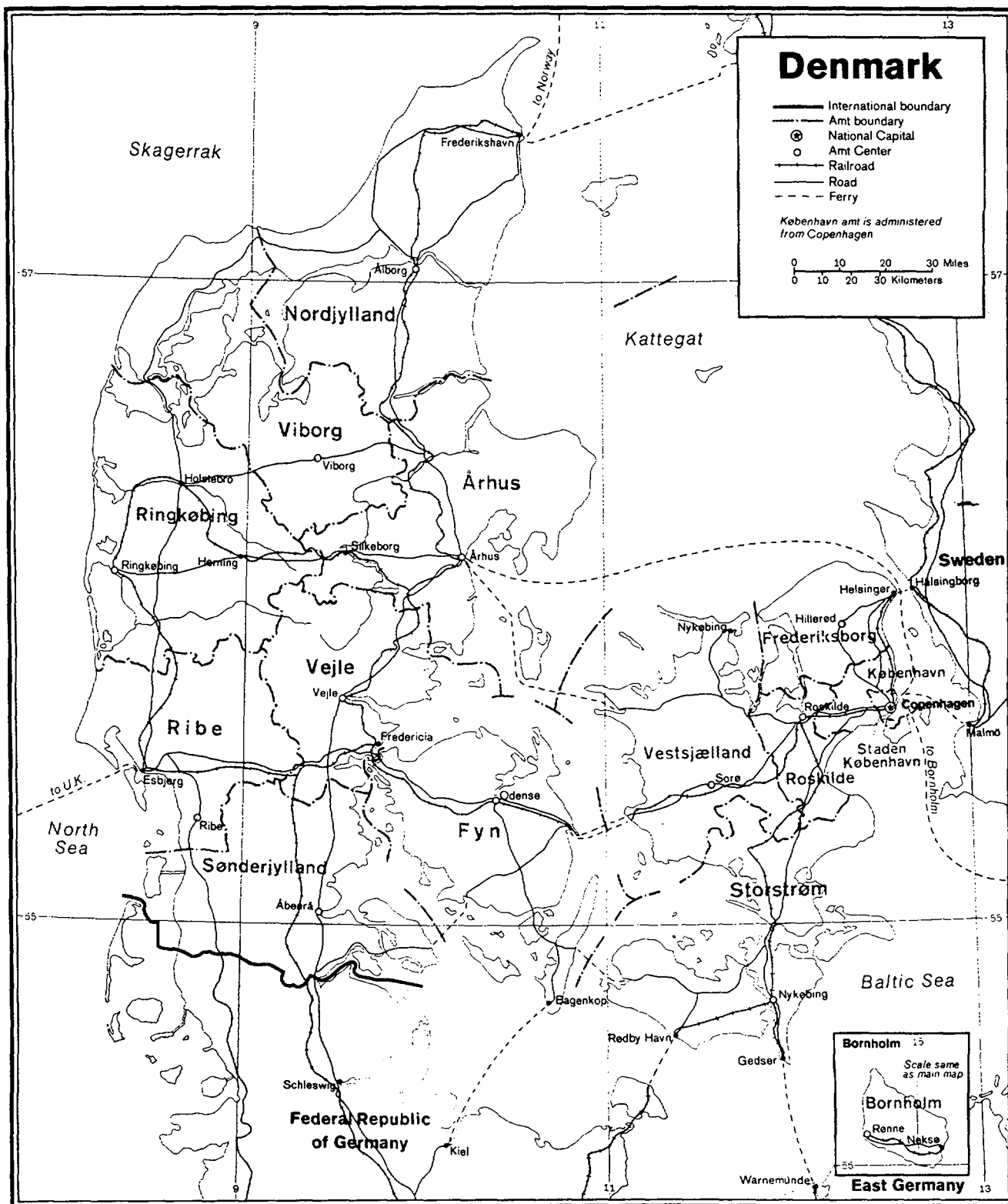
4. Considering its size, the FGN has a carefully conceived and planned navy in the Baltic. It combines assets well suited to the geography at a price which appears to be acceptable to the German taxpayers. The problem is that it cannot fulfill its stated mission and without a massive naval buildup will remain unable to do so.

5. The FGN forces in the North Sea provide a credible force with which to protect German ports and assist other NATO naval forces in the North and Norwegian Seas. However, expanding these forces will do little to alter the naval balance in the area and additional expenditures for blue water assets do not appear worthwhile.

Clearly control of the Baltic in war will be a major Soviet objective. The size and structure of the Soviet Baltic Fleet is indicative of the importance the Soviets place on this theatre. Given the character of the Federal German Navy, Soviet strategists must assess the cost, in naval terms, of fighting to take advantage of Baltic Sea control. The allies need an inexpensive and credible strategy to raise the stakes for the Soviets. Since the German people have neither the will nor the enormous assets required to tip the naval balance back in the allies favor, we must look elsewhere for a solution to the dilemma. We recommend the allies plan a strategy and fund the assets required to mine the Baltic east of Bornholm Island on a massive basis at the outbreak of hostilities. The FGN alone clearly does not have the forces to accomplish such a mining campaign on the scale required to seriously raise the stakes for the Soviets. Allied air assets and mines must be committed early if NATO is to deny the Soviets Baltic Sea control and all its advantages.



appendix b



## APPENDIX C

### THE BUNDESMARINE

The West German Navy is a formidable force. Its assets consist primarily of efficient and well organized aircraft and smaller coastal defense surface and subsurface units. Some surface units with deep water capability do exist. A detailed discussion of the individual asset types and their capabilities will be provided later.

West German control of its Navy, is vested in the Minister of Defense, a civilian. In time of crisis this responsibility is assumed by the Federal Chancellor.

The Chief of Staff Navy controls the three main units of the Bundesmarine, the Fleet Command (afloat and air assets), the General Naval Office (recruitment and training), and the Naval Support Command (logistics and maintenance). He also controls a command staff. In wartime the majority of the Bundesmarine would be placed under the direct command of the Commander Naval Baltic Approaches (COMNAVBAJTAP) subordinate to Supreme Allied Command Europe (SACEUR), and Allied Forces North (AFNORTH).

To provide some current review of the capabilities of the Bundesmarine a very brief description of selected combatant vessels and aircraft will be presented here.<sup>1</sup>

Three modified LUTJENS Class DDGs (U.S. Charles F. Adams) with a full load displacement of 4500T provide a blue water antisubmarine warfare (ASW) and antisurface warfare capability (ASUW), and a modest force anti air warfare defense (AAW). This class is about 15 years old

and carries eight Harpoon surface-to-surface missiles (SSM) and 40 Tartar surface-to-air missiles (SAM). It also carries two, five-inch guns, six torpedo tubes and eight antisubmarine rocket (ASROC) launched torpedoes. This class is equipped with a link capable tactical data system and could be fully integrated in U.S. battle force operations.

Four Hamburg class destroyers with a full load displacement of 4700T and 439 foot length also have a deep water surface and subsurface warfare capability. This class is nearly 20 years old, has a top speed of 34 knots and carries four Exocet SSM, three, 3.4-inch guns, eight ASW 375mm mortars, depth charges and four torpedo tubes. These ships can also lay mines. An extensive modernization program was completed on the class in 1977. Though further updating will be required, this class will remain active well into the 1990's.

The Bremen Class (Type 122) consists of six frigates which are relatively new, the last was commissioned in 1984. These vessels proved modern ASW, ASU, AAW. This 428 foot vessel has a full load displacement of 3400T and a maximum speed of about 30 knots. In addition to two Lynx helicopters with dipping sonar they carry eight Harpoon SSM, eight Sea Sparrow SAM and two Stinger missile launchers. One 76mm gun, a 20 tube 105mm rocket launcher and 4 torpedo tubes round out the weapons suite. This is an extremely capable deep or shallow water man-of-war.

The review of the major surface combatants will be completed with this description of the three units of the Koln class (Type 120). These 20 year old ships have a full load displacement of 2700T, a maximum



speed of 28 knots and an overall length of 360 feet. Fitted with two, 3.9-inch guns and two depth charge mortars, the ships also carry four torpedo tubes and can lay up to 80 mines each. These vessels are not as capable as the newer Type 122 and some have already been sold.

The Bundesmarine submarine force consists of 18 Type 206 and 6 Type 205 units. The Type 206 submarines are about 10 years old, have a displacement of about 500T (submerged) and are 160 feet in length. This class is fitted with eight torpedo tubes and is diesel-electric powered. The hull is made of high-tensile nonmagnetic steel, a feature unique to the submarines of this navy. Mines can be carried by this submarine both internal and external to the hull. The class of submarine is scheduled for modernization between 1985-91 and again in the early 1990's to accommodate a new torpedo. Though not an open ocean platform, this is an extremely capable coastal craft.

The Type 205 submarine is about 15 years old and has a displacement of 450T (submerged). It is 145 feet in length, has eight torpedo tubes and is also diesel-electric powered. This class can lay mines and was the first class of submarine designed and built by the Federal Republic of Germany since the Second World War. This submarine is not an open ocean unit.

The West Germans plan to build a new and larger class consisting of 12 submarines, the Type 211. It is planned as a true blue water class of approximately 1200T displacement. The Type 211 is similar to the Norwegian Type 210 and will use Norwegian electronics. They will replace the six Type 205 and the six older Type 206 units.

The mission of the Bundesmarine over the past 30 years has been largely centered on coastal defense operations and a large number of vessels in the order of battle support that scenario including corvettes, missile fast attack craft and several craft associated with mining missions, minesweepers (coastal and inshore) minihunters and minelayers.

Five Thetis Class and one Hans Burkner Class corvettes provide 20 year old units of less than 1000T displacement for coastal defense purposes. Both classes carry mortar depth charges and torpedo tubes and have speeds of about 19 knots using diesel propulsion.

In the category of light forces, the Bundesmarine has three classes of very capable missile fast attack craft, Type 143A, Type 145 and Type 143. The Type 143A is a 390T displacement vessel capable of speeds to 40 knots. This ship is 190 feet in length and equipped with four Exocet SSM, one 76mm gun and can lay mines. There are 10 units in this class and they were commissioned 1982-1984.

Twenty units of missile fast attack craft, Type 148, with 265T displacement are also included in the force. This class can attain speeds to 38 knots, is 154 feet in length and is equipped with four Exocet missiles and a 76mm gun. These units were commissioned from 1972-1975.

The Type 143 missile fast attack craft consists of 10 units and is similar in size and speed to the Type 143. The class is equipped with four Exocet SSM and is presently being modified to provide a SAM capability. These units have two torpedo tubes and after modification they will have one 76mm gun.

The mine warfare forces comprise the final group of ships that will be considered as the forces of the Bundesmarine are discussed. There are 60 units in this force with the majority in the Schutze, Lindau, Frauenlob and Ariadne Classes, including both coastal and inshore minesweepers. In general, the capabilities are similar and the details of each class will not be discussed. One development, however, is worth noting. Six ships of the Lindau Class have received the Troika conversion which enables the ships to guide three unmanned submersible minesweeping vehicles. Two new classes are under development. These new ships will replace older units.

The Bundesmarine air units contribute significantly to the navy's capability. The Sea King helicopter, of which the navy has 22, are primarily used for search and rescue, however, several are being equipped with armament as the British units were during the Falklands War. The Brequet 1150 "Atlantic," built in France, provide a long range maritime patrol capability and five units have ELINT equipment. There are a total of 19 of these units. The Lockheed F-104G and RF-104G make up the largest number of airframes in the navy with 43 of the fighter version and 26 of the reconnaissance type. This relatively old U.S. design was provided for manufacture in West Germany and has been very successful, but will be replaced soon. The Panavia "Tornado" is the final aircraft which will be described. It is a very capable swing-wing strike and reconnaissance aircraft being built in a combined effort among Germany, Italy and the United Kingdom. There are presently about 48 in the FGN inventory and a total of 112 is planned for procurement.

The role of the Bundesmarine within NATO is vital to the defense of the Baltic region and is evolving into a greater role in the north Atlantic. The West German Navy provides approximately one-third of the naval assets for use on NATO's northern flank; this number includes about three-fourths of the assets which would be used in the Baltic.<sup>2</sup>

The Fleet Commander fills a national role as Commander-in-Chief of the German Fleet (CINCGERFLEET) and a NATO role, within the Allied Command Europe (ACEUR) as Flag Officer Germany (FOG). Appendix D provides a NATO naval command structure. In his NATO role FOG is responsible to Commander Naval Forces Baltic approaches (COMNAVBALTAP) who is subordinate to Commander Allied Forces North (CINCNORTH) under SACEUR.

The West Germans have only one national contingency force within the Navy, the Standing Fleet Operational Group. This contingent consists of three to five destroyer sized vessels, one fast patrol boat and a minesweeper. Naval air and amphibious assets are added as needed. This contingent is established on a quarterly basis, operates together from four to six weeks and provides the West Germans with a measure of the readiness and capability of the fleet to operate and combat the threat in the North Sea, the Baltic Sea and the Baltic approaches.<sup>3</sup>

Subordinate to CINCGERFLT in the Bundesmarine structure is the Commander German North Sea Fleet who is responsible for German naval forces in the North Sea and other foreign waters. His NATO role subordinates him to COMNAVBALTAP and Commander German North Sea Subarea

(COMGERNORSEA) which permits his operational control over specific assigned NATO units and where he may overlap with FOG. COMGERNORSEA is then responsible for the protection of the transport of war materials to the continent through North Sea ports. He may also provide reinforcement to strengthen nearby NATO sea areas in the Baltic approaches or to the North or West.

In addition to its duties to Allied Command Europe through CINCNORTH and COMNAVBALTLP, the Bundesmarine has responsibilities with the Allied Command Atlantic (ACLANT). Two officers represent West Germany on the staff and annually the Navy provides approximately three destroyers for four months of duty each with the Standing Naval Force Atlantic (STANAVFORLANT), subordinate to ACLANT.<sup>4</sup> This NATO force consists of approximately six ships from the United States, Canada, the Netherlands, Great Britain and West Germany. Occasionally Portugal, Denmark and Norway participate. The purpose of STANAVFORLANT is to provide integrated naval training, to demonstrate the military and political resolve of the NATO participants and to provide a nucleus on which to build should exercise or real world contingencies require. The command of STANAVFORLANT is rotated among participating members and since 1980 Germany has been capable of filling this leadership position.

Having reviewed the Bundesmarine's NATO responsibilities to ACEUR and ACLANT we have but one final NATO responsibility to review, its role in the Standing Naval Force Channel (STANAVFORCHAN). This organization is commanded by the Allied Commander-in-Chief Channel (CINCHAN) at

Northwood, England. Its forces consist of approximately six to eight mine countermeasures units of various participating nations and is permanent in nature. Its purpose is much the same as that of the STANAVFORCHAN, but in the mining countermeasures role.

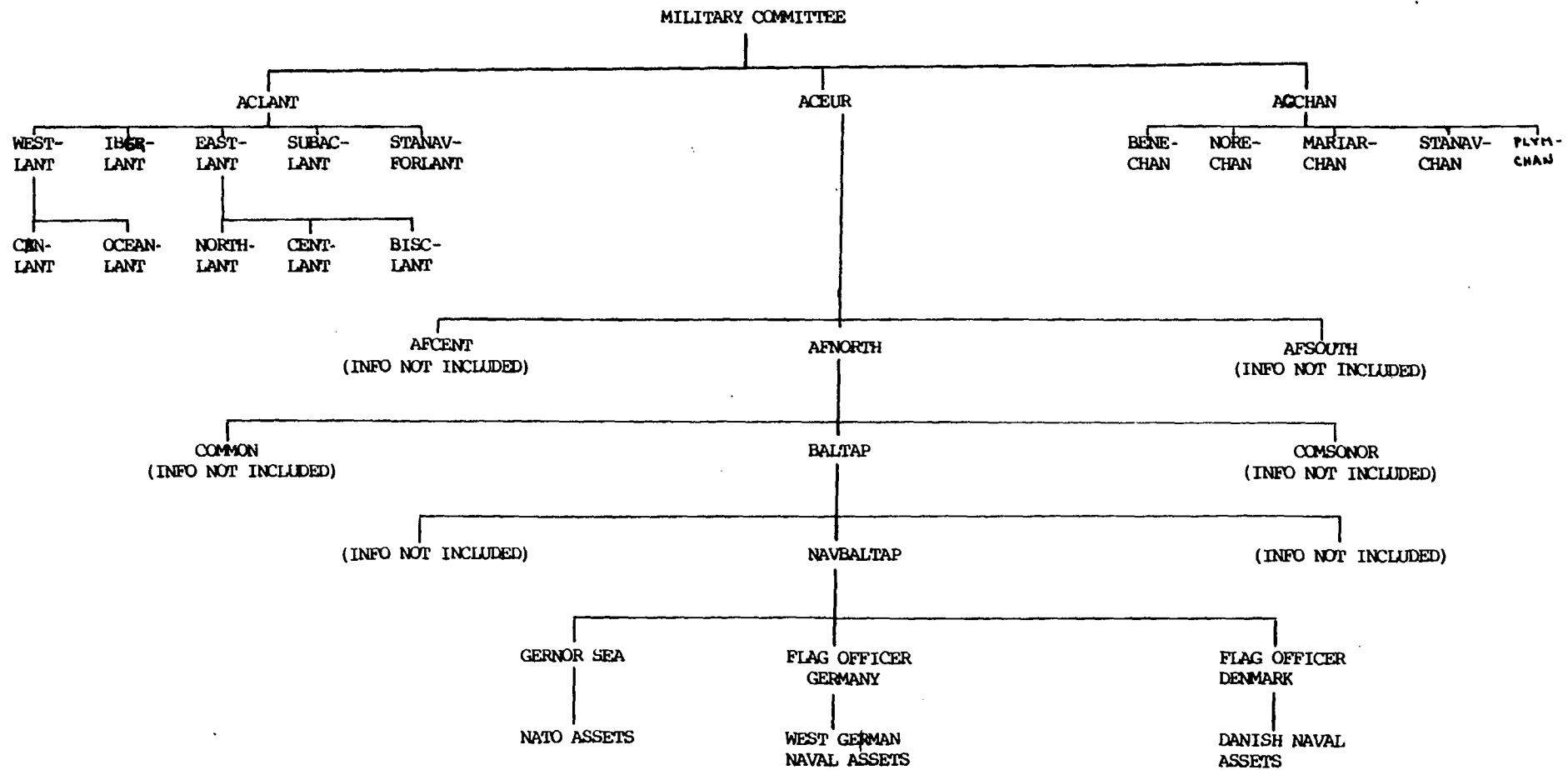
# APPENDIX D

## WEST GERMAN NAVAL ORDER OF BATTLE\*

Manpower	36,500; and about 4,800 officers; 11,000 conscripts
Reserves	25,000
Fleet	
Destroyers	3 modified Adams class DDG 4 Hamburg (Type 101A) class
Frigates	3 Koln (Type 120) 6 Bremen (Type 122) class
Corvettes	5 Thetis (Type 420) class 1 Hans Burkner class
Submarines	18 Type 206 6 Type 205
Light Forces	10 Type 143A (Fast Attack Craft-Missile) 10 Type 143 (Fast Attack Craft-Missile) 20 Type 148 (Fast Attack Craft-Missile)
Amphibious Forces	28 Type 521 LCM 22 Type 520 LCU
Mine Warfare Forces	21 Schutze (Type 340-341) Class (Minesweepers - Coastal) 18 Lindau (Type 331, Minehunters; Type 351, Troika) Class (Minesweepers - Coastal and Minehunters) 10 Franenlob (Type 394) Class (Minesweepers Inshore) 8 Ariadne (Type 393) Class (Minesweeper - Inshore)

\* Service Forces, Training Ships, Miscellaneous, Tugs, Icebreakers, Auxiliary Ships, Coast Guard Vessels, Fishery Protection Ships and Survey Ships are not included in this list.

APPENDIX E<sup>1</sup>  
 NATO NAVAL COMMAND STRUCTURE  
 NAC/DPC





NOTE

CHAPTER II (Pages 12 to 16)

1. Sergei G. Gorshkov, The Seapower of the State, 2nd ed., revised 1978. Quoted Department of Navy, Understanding Soviet Naval Developments (Washington: Office of EXO, 1981), p. 7.

2. Ibid., p. 8.

3. Paul H. Nitze, et. al., Securing the Seas (Boulder: Westview Press, 1979), p. 192.

4. Wally L. McDonald, "The Growing Warsaw Pact Threat to NATO Maritime Forces," NATO Review, June 1984, p. 3.

5. Anthony Farrar-Hockley, "The Influence of the Northern Flank upon the Mastery of the Sea," Naval War College Review, May-June 1982, p. 8.

6. Patrick Wall, "NATO: Both Sides Have Their Troubles," Sea Power, April 1983, p. 58.

7. Farrar-Hockley, p. 8.

8. Ulrick Weissar and Klaus Jancke, "The Problems in the Baltic," NATO Fifteen Nations, April-May 1978, p. 54.

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### CHAPTER III (Pages 17 to 19)

1. Sayre A. Swarztrauber, "The Potential Battle of the Atlantic," Proceedings, May 1979, pp. 115-116.
2. The Federal Republic of Germany, Ministry of Defense, White Paper 1983, The Security of the Federal Republic of Germany, p. 144.
3. Wall, p. 55.
4. Farrar-Hockley, p. 12.
5. Ibid.
6. Ibid.

## NOTES

### CHAPTER IV (Pages 20 to 24)

1. The German Navy, Special Report, Navy International, February 1984, p. 78.
2. The type 208 class was originally scheduled for delivery in the 1990's but was postponed due to technical and financial reasons. This submarine will have a conventional propulsion system independent of the outside air. German Navy, Special Report, Navy International, February 1984, p. 75.
3. Naval Air Wing Two stationed at Tarp flies F/RF-104G Starfighters and Naval Air Wing three stationed at Nordholtz flies Breuget Atlantiques. Each of these wings flies coordinated reconnaissance and strike missions with the Tornados of Naval Air Wing One at Kropp. Bunke, Lieutenant Commander Mike (FGN), "Flying the Tornado" NATO Sixteen Nations, June-July 1984.
4. For discussion of coordinated operations see: Bethge, Admiral Ansgar (FGN) "Chief of the German Naval Staff Interview" Navy International, February 1984, and Bunke, Lieutenant Commander Mike (FGN), "Flying the Tornado." NATO Sixteen Nations, June-July 1984.
5. Bethge, Admiral ANsgar (FGN). "Chief of the German Naval Staff Interview." Navy International, February 1984.

## NOTES

### APPENDIX C (Pages 26 to 32)

1. Additional detail may be found in Captain John Moore, RN, FRGS, eds., Jane's Fighting Ships (New York: Jane's Publishing, Inc., 1984).

2. John M. Tindall, The Navies of the Federal Republic of Germany and the German Democratic Republic: A Comparison and Analysis of Structures, Alliance Relations, Doctrine, and Capabilities (Monterey, California, Naval Postgraduate School, 1983), p. 30.

3. Ibid., p. 31.

4. Ibid., p. 32.

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